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FLEXIBILITY FOR VOCATIONAL EDUCATION THROUGH COMPUTER SCHEDULING. QUARTERLY REPORT.

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This progress report of a 2-year project (ending April 30, 1968) offers a random sampling of course schedule configurations and specific course performance criteria submitted to the Stanford project staff for evaluation and comment, and a brief statement of the project's data collection and data evaluation objectives. The project seeks to demonstrate that it is feasible to improve vocational curriculum and vocational elements of general curriculums by applying computer scheduling technology to increase flexibility and by encouraging the use of performance criteria to measure student achievement. Specific information included is (1) sample weekly schedules for 18 vocational courses such as the data processing course which includes two 90-minute laboratory meetings and one half-hour large-group meeting each week, (2) examples of the clarity with which performance objectives can be defined as behavioral outcomes such as, in basic electronics, "Given a drawing of an atom, be able to label all of the following items: neutron-its charge, proton-its charge, electron-its charge, and nucleus-its charge," (3) a chart showing interdisciplinary approach to teaching power mechanics with coordinated learning activities in science, math, and English, and (4) abstracts of presentations and summaries of discussions of a conference to examine the relationship between social studies and vocational education. (PS)

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QUARTERLY REPORT

1 July, 1967

Contract No. OE-2CAD-570-94

FLEXIBILITY FOR VOCATIONAL EDUCATION THROUGH COMPUTER SCHEDULING

U. S. DEPARTMENT OF
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FLEXIBILITY FOR VOCATIONAL EDUCATION THROUGH COMPUTER SCHEDULING

Contract No. ~~OE-2CAD-570-94~~ OEC-4-6-062409-1804

Dwight W. Allen

I July, 1967

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PROJECT OVERVIEW

A Research Project of: Stanford School of Education, Stanford University, conducted under the provisions of Section 4 (C) of Public Law 88-210.

Title: FLEXIBILITY FOR VOCATIONAL EDUCATION THROUGH COMPUTER SCHEDULING.

Objectives: This project seeks to demonstrate it is feasible to improve vocational curriculum and vocational elements of general curriculums by applying computer scheduling technology to increase flexibility and by encouraging the use of performance criteria to measure student achievement. It is expected that the economic feasibility of using the Stanford School Scheduling System (SSSS) as an enabling technology for vocational and technical education will also be demonstrated by this project.

Procedures: The project is being conducted in both vocational-technical and comprehensive schools. The schools selected reflect a wide geographic distribution; a balance among rural, suburban, and urban areas; and variety in terms of school type, grade organization, enrollment, and clientele served. SSSS is being applied to scheduling the vocational programs in each of these schools.

The faculty in each school is encouraged to (1) study the relationship between general education and vocational education; (2) develop performance criteria that will measure achievement in all vocational areas; and (3) delineate procedures whereby at least minimal vocational experiences can be introduced into schools which now lack vocational programs. Stanford's project staff, both senior staff members and research assistants, are coordinating these efforts.

The project includes a program of systematic data collection and analysis to assess the extent to which project goals are being realized. The results of this assessment will be widely disseminated to other educators in the vocational technical field. By the end of the project, SSSS will have had sufficiently diverse application to demonstrate the feasibility of extensive redesign of existing vocational curriculums.

Time Schedule: Beginning May 1, 1966

Ending April 30, 1968

REPORT SUMMARY

Project schools have continued to develop new performance criteria for their vocational education programs and to develop flexible schedule designs under which it becomes possible to implement these highly individualized programs. This report offers a random sampling of course schedule configurations and specific course performance criteria that have been submitted to the Stanford project staff for evaluation and comment. These exemplify project effort that will be manifested in flexible schedules and new curriculums implemented in project schools in the coming school year. This quarterly report also contains a brief statement of the data collection and data evaluation objectives of the project.

A report by Miss Claire O'Brien, Consultant in the Bureau of Business Education of the California Department of Education and Advisory Committee member of the Stanford project, on the general education conference held at Golden High School in Golden, Colorado on April 7 and 8 of this year is also included as part of this quarterly report. Her report aptly summarizes the conference content and in its appraisal demonstrates what this and similar conferences can accomplish.

FLEXIBLE SCHEDULE DEVELOPMENT

The teaching staffs in each of the schools participating in the Stanford Vocational Education Project, with assistance from project staff, have been developing schedules designed to accomodate the individualized and performance-oriented vocational education programs also under development. This is being done using the Stanford School Scheduling System (SSSS) which aims at achieving an optimum balance of the educational resources of students, teachers, time, and facilities available at each school against the educational design of the new programs contemplated at that school. The schedule specifications submitted by the project schools have been preceded in every case by considerable in-service work between teachers and project team members in curriculum analysis and modification to assure that better vocational education would persist as the ultimate objective of scheduling flexibility. Flexible scheduling, by itself, cannot upgrade the quality of the education offered, but it can provide the means for implementing the educational decisions regarding changes in program, instructional methods, teacher assignment, and student grouping whereby qualitative improvement can be achieved.

Vocational program and scheduling innovation occasionally have been thwarted during the project by the rigidity of requirements stipulated by the Departments of Vocatioanl Education and by professional licensing boards in certain states and continued effort must be applied to overcoming such restrictions where they occur. Overall, however, the changes contemplated in the new programs and new schedules have been both widespread and promising, despite the fact that for most vocational instructors the change from a traditional block schedule to a flexible schedule is both radical and traumatic.

In all the schedules submitted a considerable amount of time is open-scheduled. It is, in fact, impossible to achieve flexibility in a schedule without leaving a certain amount of the student's time unscheduled. It is in the utilization of this time that variations in individual student ability, interest, and learning style are accomodated. By combining open-scheduling with an open-laboratory approach, it becomes possible for students in a performance-oriented program to schedule themselves back into a given phase of instruction or a given instructional area on a task-accomplishment basis. In a sense, this permits each student to develop his own blueprinting for educational progress. It also permits individual vocational teachers to incorporate large group and small group instruction (modes normally associated with team teaching) on an "as needed" basis within the overall schedule design. In many project schools these advantages are consistently being applied.

Examples of curriculum modification toward a performance goal-orientation that parallel schedule design development are included in the section that follows. The examples given below typify the kind of course schedule under which some of the new programs are being taught. All the examples refer to a weekly (5-day) schedule cycle. None of them should necessarily be considered as optimum, since each adheres to the principle that an optimum schedule is one that establishes the unique balance of educational resources and educational objectives required by a given context. Each example represents an individual student's schedule and also includes a large percentage of unscheduled time for independent effort and study.

Sample Weekly Schedules

Vocational Auto Mechanics

4 one-hour, large-group meetings
2 1/2 hours of small-group laboratory instruction

Culinary Arts

1 forty-minute large group meeting
1 forty-minute small group discussion period
1 one-and-one half hour small group laboratory

Vocational Drafting

1 forty-minute large group meeting
2 one-hour medium group meeting
1 forty-minute small group meeting

Automative and Power Mechanics

Students in both courses participate in a common 40-minute large group meeting which is team taught
Each course also meets separately for 40-minutes

Electronics

1 forty-minute large group meeting
1 one-and-one half hour small group laboratory

Vocational Typing

4 forty-minute meetings
1 one-hour meeting

Vocational Agriculture

1 one-and-one half hour laboratory
2 forty-minute small group meetings

Power Mechanics

1 twenty-minute small group meeting
2 one-hour laboratory meetings

Automative and Electrical

Students in both courses participate in a forty-minute large group meeting which is team taught
Each course meets separately in a one-hour and forty-minute lab

Upholstery

3 one-hour meetings
1 ninety-minute laboratory meeting

Office Occupations - First and Second Levels

Students in both levels participate in common 55-minute large group meeting
Each level meets separately in a 35-minute large group meeting
Each level has two 35-minute small group laboratory meetings

Data Processing

1 half-hour large-group meeting
2 ninety-minute laboratory meetings

Vocational Home Economics

1 forty-minute large-group meeting
1 one-hundred minute laboratory meeting
2 eighty-minute laboratory meetings

Automative Service

1 forty-minute large-group meeting
2 one-hour labs

Ornamental Horticulture

1 forty-minute large group meeting
2 one-hour and forty-minute labs

Welding

1 one-hour large-group meeting
2 two-hour labs

Vocational Automative

1 forty-minute large-group meeting
1 eighty-minute small-group meeting
1 forty-minute small-group meeting

Agricultural Science

2 two and one-half-hour labs

PERFORMANCE CRITERIA DEVELOPMENT

Performance criteria and vocational course development aimed at individual student achievement continued as a major project effort in participating schools throughout the recent quarter. As noted earlier, program development has been conducted in conjunction with flexible schedule design for individual schools.

Project consultants continue to be confronted with the problem of states which withdraw financial support from vocational programs when the orientation of such programs switches from "clock-hour" accounting to individual student achievement. This problem exists as a carry over from the Smith-Hughes era during which financial support was granted only to accredited vocational programs and accreditation was limited to programs meeting at least three hours daily. It is encouraging to note, however, that many states have given full support to the project following meetings between project consultants and state officials in which the project's operation and objectives have been explained.

Project staff contacts with state governing bodies have made them aware of the amazing range and irrationality of vocational program requirements from state to state and made an ever more convincing case for establishing performance goals as the basis for vocational education throughout the nation.

In each of the project schools instructors have been writing performance criteria for new curriculums with assistance from a locally established advisory committee and submitting these materials to Stanford for evaluation and comment. It becomes increasingly evident that the relevance of all such materials hinges principally upon the clarity with which performance objectives are defined as behavioral outcomes, and that there is a strong element of truth to Robert Mager's statement that if learners are given a copy of clearly stated course objectives, the teacher may not have to do much else. Clearly without such objectives, existing programs are more and more becoming exposed as irrelevant.

We have selected examples of criteria submitted by project schools to include here as illustrative of the contribution individual instructors at project schools are making toward performance oriented vocational education. The examples, selected at random, cover a variety of subject matter and in some cases present a variety of possibilities for mastering the same or a similar concept in a particular field of study. An advisory committee meeting will be held at Stanford in October to evaluate the results of initial implementation of many of these programs in September and to recommend any program alteration or adjustment that appears to be needed.

SAMPLE PERFORMANCE CRITERIA

Basic Electronics
Marshall High School
Portland, Oregon

Roger Tunks - Instructor

1. Given a drawing of an atom, be able to label all of the following items:
   a. Neutron - its charge
   b. Proton - its charge
   c. Electron - its charge
   d. Nucleus - its charge

2. Given a circuit to operate a light bulb, be able to indicate how to measure current with an ammeter and voltage with a voltmeter. Show the correct polarity of each meter. Also show breaks and additions to the curcuit.

3. Given five carbon resistors, be able to read and write the resistance from the colorband from at least four to an accuracy of 100 per cent.

4. Be able to list the filament voltage for at least four or five given tube numbers using correct units.

Wood Lathe
Valley High School
Las Vegas, Nevada

William Levins - Instructor

1. Given a list of steps for preparing and mounting material for spindle turning, the student will be able to place all of these steps in correct sequence.

2. Given five cutting tools and a list of five cutting operations, the student will be able to perform the cutting operation with the proper tool to the satisfaction of the instructor.

3. Given a picture of the powermatic lathe and lathe tools, the student must be able to label the following parts and accessories:

   head stock
   tail stock
   tool rest
   tool rest base
   speed control handle
   tail stock spindle clamp
   inside calipers
   outside calipers
   dividers
   spur center
   ballbearing center
   tail stock handwheel
   angle tool rest
   knock out bar
   face plate

Typing
Poway High School
Poway, California

Janice Baulch - Instructor

1. Given a pictorial representaion of the top left segment of a typewriter; the student will be able to label eight parts which must include the carriage return, paperguide, marginset, and carriage release lever.

2. When given the information of the address to whom the postal card is to be sent, and the message, the student shall type, in correct form, a post card.

3. Given a paper with horizontal lines, the student shall be able to type words in the lines, making sure they do not type through, below, or too far above that line.

4. The student should, by use of the type bar guide and the carriage release lever, draw a straight horizontal line with a pen or pencil on paper that is in the typewriter.

Industrial Electricity and Front End Inspection
North Miami High School
North Miami, Florida

W. Boden and A. D. Ballou - Instructors

North Miami High School, which has an enrollment of 3,500 students has been added to the vocational project during the second year. The vocational education department in this school is quite large and has chosen to work as a team in the development of instructional packages. Below are extracts from two of the units of instruction that have been developed so far.

Industrial Electricity

Directions to the student:

This is a self study instructional package assembled for the purpose of providing you with the information necessary to enable you to successfully meet the objectives and concepts of the Industrial Electricity Course # 9275 Unit - National Code Rules governing Conductors and Insulation. Study the enclosed information sheets. Complete the assignments and jobs and study the filmstrips if any are listed. Your instructor will answer any questions that may arise for which you can find no answer in the assigned readings. You may also need to use some of your unscheduled time to meet with the instructor or utilize the shop facilities to achieve your objectives.

When you have a clear understanding of the information contained in this package you may ask your instructor for a preliminary test. This preliminary test will be evaluated by you. If you have a passing grade you may ask to take the Unit Test. This test will be evaluated by your instructor and will determine if you will pass on the next instructional package. A grade of 70% or above is necessary for advancement.

In the event that you do not pass the Unit Test, you will be required to restudy this package and be retested.

Unit Objectives:

1. You must have the ability to compute mathematically, according to the National Code, the size and type of conductors for a specified amperage load on electrical installations.

2. You must have the ability to determine from memory the type insulation to be used on conductors for specified conditions and voltage according to the National Electrical Code.

3. You must have the manipulative ability to use a wire guage to determine conductor sizes.

4. You must have the ability to read and manipulate a Micrometer to measure conductors to within 1,000ths of an inch.

5. You must have the ability to compute mathematically, using the voltage drop formula, to determine Voltage Drop permitted by the National Electrical Code on electrical installations for lighting and power.

6. Given a list of various types of metals you can select the ones used for conductors with 100% accuracy.

Learning Activities:

A. Lectures:
#25 - Determining the safe carrying capacity of Conductors according to the National Electrical Code
#26 - Parts, Nomenclature and use of an Outside Micrometer

B. Resource Materials:
1. Information sheet - wire calculations
2. Reading assignments:
(a) Abbott and Stetka -- 11th ed.
Article # 310
(b) Fundamentals of Electricity - Graham - 4th ed.
Pp. 22-30
154-155
(c) So. Florida Building Code - 1964
Pp. 258

3. Assignment sheets
   (a) #22 - Carrying capacity of conductors
   (b) #23 - Measuring conductor sizes
   (c) #24 - Materials used as Conductors
   (d) #25 - Insultation on conductors
   (e) #26 - Wire tables and voltage drop
   (f) #27 - Types of conductor connectors and splices

C. Job Sheets - Manipulative
   (a) #1 - Using a wire guage
   (b) #2 - Using a micrometer
   (c) #3 - Making splices
   (d) #4 - Making terminals on conductors

Preliminary Front End Inspection

Directions to the student: (same as before)

Unit Objectives:

A Unit Objective is the specific knowledge and skill which you will be expected to demonstrate upon completion of this package. You will be expected to reach a definite minimum level of achievement. The minimum level of achievement that is expected of you is stated in each of the objectives listed below. This instructional package has been given to you because we know you can do the work. You are encouraged to go as far beyond the minimum level as you can go. Study the objectives and then set your own goals. Refer back to these objectives frequently as you read and carry out your shop work.

The student must:

1. Demonstrate to the instructor how to drive a car across the scuff guage and interpret the readings.

2. Demonstrate to the instructor the proper method of checking ball joint free play with a John Bean ball joint checker.

3. Recognize and report to your instructor defective and worn suspension or steering components in a vehicle.

4. Measure riding height of several vehicles with a guage and with tape measure.

5. Make height adjustment

6. Demonstrate to the instructor how to identify faulty shock absorbers on a live vehicle.

Learning Activities:

Listed below are learning materials and shop activities that will help you achieve the objectives given on the preceding pages. Use them to your advantage.

Study - Crouse, W. H.
Automative Chassis and Body
Cond. Edition 1959
Sections 50-54, 118

Stockel
Auto Mechanics Fundamentals
First Edition 1963
Section 15 Pp 1-21

Motor Service
Automative Encyclopedia
Fourth Edition 1962
Section 39 Pp 1-8

Information Sheets:
Ball Joint Specifications
Ball Joints

Job Sheets:
Checking Ball Joints
Preliminary Inspection Procedure

View - Filmstrips:
Front and Rear Suspension Service Chrysler

Complete - Enclosed Assignment Sheets

Power Mechanics
John Marshall High School
Portland, Oregon

One of the principal objectives of the general education conferences held under this project has been to encourage schools to investigate possible interdisciplinary approach to Power Mechanics that will be implemented in the coming school year.

POWER MECHANICS

Coordinated learning activities

Week No.	IPM 5-6 Power Mechanics	SPM 5-6 Science	NPM 5-6 Math	EPM 5-6 English
2	Start engine Make adjustment to carb. & ignition	Survey of measurement Graduated cylinders Balance Glassware	Fractions Fundamentals of addition Problem applications	Testing Technical report #1 Dyno-nature of prejudice & discrimination
3	Dyno demonstration Use Dyno	Steel rule Measurement of length area and volume Verimer caliper	Fractions	Technical report #2 Dyno (due) Prejudice & discrimination
4	Remove cylinder head & measure volume Disassemble engine except. carb. & ignition	Micrometer Measurement of inside diameters Measurement of temperature	Decimals Decimal equivalents of common fractions Basic fundamentals	Prejudice & discrimination
5	Measurement of all bearing surfaces	Micrometer Dial indicator	Decimals Use of decimals in reading feeler gages, etc.	Technical Report #2 Measurement (due Prejudice & discriminatio
6	Rod alignment Wristpin fit - Rings Bearings	Lubrication Viscosity of oils (determine) 10 wt, 30 wt. 10-30 wt, etc.	Tolerances How to determine tolerance connected with certain measurements in mechanics	
7	Lubrication - types of oil pumps Seals Hone cylinders	Lubrication Friction of bearings with and without lubrication	Geo. Angles How to measure Common types	
8	Grind valves Clean ports	Lubrication Friction continued Cleaning qualities of detergent oil	Angles Construction of	Technical Report #3 Disassembly (due)
9	Install crankshaft Assembly Install Rod & Piston	Solids Measurement of pistons and compression ratio	Geometry Use of degree wheel Constructions, etc.	

Week No.	IPM 5-6 Power Mechanics	SPM 5-6 Science	MPM 5-6 Math	EPM 5-6 English
10	Install camshaft Check timing	Liquids Volume of lead Measurement of capacity of lead	Geometry	
11	Fastening devices Install head	Gases Generation of O_2 Measuring volume Atmospheric pressure	Statistical measures (graphs) How to prepare 3 basic graphs	
12	Attach external components Start fine adjustment	Temperature Fahrenheit Centigrade	Statistical measures (graphs) How to collect data	Technical Report #4 Major components (due)
13	Dyno test		Graphs Construction of graphs for display	
14	Dyno test		Graphs Use of data collected in science and P,M.	
15	Remove carb. air cleaner Check body warpage shaft bushing Disassemble Car. Clean air cleaner		Proportions Relation of fractions to ratio to proportions	
16	Assemble carb. Install carb. and adjust	Grit Oil bath air cleaner contents Sludge from crankcase	Proportions How to solve proportions Related problems	
17	Adjust Govenors Dyno test	Strength of materials Bolts Auto body steel (compare cars)	Proportions	Technical Report #5 Carburator (due)

Week No.	IPM 5-6 Power Mechanics	SPM 5-6 Science	MPM 5-6 Math	EPM 5-6 English
18	Dyno test Use scope to draw diagram of firing trace Measure air gap, draw diagram of wiring, remove flywheel	Electricity A.C.	Solving for unknowns	
19	Measure resistance of armature and condenser measure mf Replace points & adjust gap & timing	Electricity D.C.	Solving for unknowns	
20	Attach flywheel and adjust airgap Assemble engine & start			
21	Dyno Draw diagram of firing trance	Electricity Transformers-coils rectifiers	Solving for unknowns	Technical Report #6 Ignition (due)
22	Modify engine	Batteries		
23	Modify engine	Anti-freeze		
24	Modify engine	Glass		
25	Modify engine	Paint and wax		Technical Report #7 Modifications (due)

DATA EVALUATION

Areas of investigation for which data are being collected and evaluated include the following:

1. Degree of operation of performance goals in vocational and other courses. A ten-question evaluation instrument is being administered in project schools to each student in vocational courses with an enrollment of less than fifty, to students in random sections of courses with an enrollment over fifty, to students in a cross-section of non-vocational courses in the school, and, finally, to teachers. A comparative analysis is being made of data from these two data sources to discover the significance of discrepancies between what the teacher's say students do and what student's themselves say they do.

2. Student and teacher attitudes toward the school and toward specific school tasks. An 18-question evaluation instrument covering these attitudes has been administered to each of the students and teachers in participating schools. The parallel forms this instrument takes contain counterposed negative and positive statements to balance the effect of set that occurs when either all negative or all positive statements are used. These data on attitudes will be collected both this year and next and will be compared on a before and after basis for schools just beginning to operate under a flexible schedule and those that have had a flexible schedule for sometime.

3. Student preparation for the world of work. Two types of data will be collected in this investigation. First, data will be collected this summer in interviews with employers of a minimum of 100 students employed during the past school year to establish a base line for comparison with similar data collected next summer. These students represent a random sample from eight of the participating high schools. Second, historical achievement-score data will be collected from all schools covering a period of two years prior to flexible scheduling and for all years on which a school has been following a flexible schedule. The latter data, which will be collected next year, will not, of course, include data from schools just making the transition to flexible scheduling. The governing assumption here is that achievement scores reflect to some degree a student's preparation for the world of work, whether he is college bound or not.

4. Utilization rates for independent study facilities, In schools for which flexible schedules have been developed, data are now being collected to determine the number of students using independent study facilities during their unscheduled time and during each time module scheduled. This data will also be collected throughout the coming school year.

Summaries of the data collected furing the first two years of this project will be available for dissemination on October, 1967 and note will be taken of any significant trends that appear to have developed during this period.

VISITS AND CONSULTATIONS

by Project Staff during

Quarter ending 1 July, 1966

State Conference, California Vocational Education Leadership at Los Angeles, California.

Workshop for Vocational Education Curriculum Development at Oregon State University.

State Conference of California Association of Secondary School Administrators at Los Angeles, California.

Annual Conference, North Central Association, Chicago, Illinois.

National Conference, Association for Supervision and Curriculum Development in Dallas, Texas.

Meetings with Vocational Education Leaders from Project Able at Quincy, Massassachusetts.

National Conference, Research Coordinating Units at Washington, D. C.

National Conference, American Vocational Association in Denver, Colorado.

Consultations with Dr. Lorry Sedgewick, Coordinator of American Industries Program at Stout State University.

Consultations with Dr. Arye Perlberg, visiting Israeli Professor at Southern Illinois University.

Visits and consultation, The Center for Research and Leadership in Vocational Education at The Ohio State University.

National Conference, National Association of Secondary School Principals at Dallas, Texas.

Meetings with Nova Schools, Nova, Florida.

Workshop for School Administrators at Boulder, Colorado.

Conference California Research Association at Berkeley, California.

Regional Educational Conference at Alliance, Nebraska.

Meetings with the Staff of Milwaukee Vocational Technical and Adult Schools - Milwaukee, Wisconsin.

Seminar with staff and graduate students from Utah State University at Logan, Utah.

Consulting and tour of Vocational facilities at Oklahoma City School System, Oklahoma City, Oklahoma.

Meeting with the Vocational Educators of R-I School District, Jefferson County, Colorado.

Consulting with the Greece Arcadia School District, Rochester, New York.

Meeting with the California Research Coordinating Unit at Sacramento, California.

Presentation to the Phi Delta Kappa Chapter of San Francisco Educators at San Francisco State College.

Meeting of Project IDEA of the Kettering Foundation at Evanston, Illinois.

REPORT ON CONFERENCE

SOCIAL STUDIES EDUCATION CONFERENCE
STANFORD UNIVERSITY FLEXIBLE SCHEDULING PROJECT IN VOCATIONAL EDUCATION

Golden High School
Golden, Colorado
April 7, 8, 1967

Reported by
M. Claire O'Brien, Consultant
Bureau of Business Education
California State Department of Education

Member of Advisory Committee
of Stanford Project

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Presentations

Dr. Dwight Allen, Stanford University
Dr. Raymond H. Muessig, Ohio State University
Dr. James P. Shaver, Utha State University
Dr. Edward R. Tower, Ohio State University

Small Group Discussions

Economics - Nine week course in Grade 12, Golden High School

Social Studies Program in Roy High School, Roy, Utah

Evaluation of the conference

Introduction

The objective of the conference was to examine the relationship between the social studies and vocational education. This objective represents one of the purposes of the Stanford Project--to stimulate each project school to analyze the efficacy of its general education curriculum for the non-college bound student. Two social studies teachers from each project school attended the conference.

This was the second conference of a similar nature to be held as part of the Stanford Vocational Education Flexible Scheduling Project. The first one was the English Conference held at Marshall High School. Portland, Oregon, on February 17 and 18, 1967, attended by two English teachers from each school.

Mr. Dudley Solomon, Principal; Dewain Wood, Chairman, Social Studies Department; and the staff of Golden High School planned and conducted the conference. Several Jefferson County district administrators and members of the faculty of Golden High Schools attended one or more meetings of the Conference. Lawrence Meier, Director of Vocational Education, Jefferson County Schools, who is also a member of the Stanford Project Advisory Committee, also attended the Conference.

Plan and program of the conference

The meetings were divided into large group and small group sessions.

The morning session on April 7 was devoted to opening remarks and statement of conference objectives by Dudley Solomon, Principal, and Dewain Wood, Chairman, Social Studies Department, Golden High School. These presentations were followed by "Perspectives" by Dr. Dwight Allen, Stanford University, and Dr. Raymond H, Muessig, Ohio State University. These two gentlemen acted as consultants to the two smaller groups formed after the presentations. The small group discussion group was divided into two sessions--one attended by each consultant.

This procedure was repeated in the afternoon when the following persons addressed the group and acted as consultants: Dr. James P. Shaver, Utah State University, and Dr. Edward R. Tower, Ohio State University.

The program on April 8 consisted of a description of a nine week course in economics presented by Mr. Sharp of Golden High School: an explanation of the Social Studies program at Roy High School, Roy, Utah, by Blaine Sorenson and Lamont Lyons; an evaluation of the conference by the consultants; and closing remarks by Ray Johnson of the Stanford Staff, Dewain Wood, and Dudley Solomon.

The presentations of the consultants are reported in detail in this paper. I felt that it was appropriate to follow this procedure, even including quotations, in order to present clearly the subject matter which was used as the basis for the discussions in the small group meetings.

Dr. Dwight W. Allen, Stanford University

Dr. Allen opened his remarks with the statement that he could only bring questions and problems to the conferences--not answers.

One concern in the area of vocational education is that it has been stereotyped in terms of the student withwhom it has dealt. There are many areas of vocational education which have not been included in the school program. More students should get some preparation for occupations. The rate of college entrance for graduates of some vocational schools is more than that of graduates of comprehensive high schools.

As we try to determine performance criteria in the social studies, we should know what students are involved. Is there a vocational component in the social studies? Is it entirely general education? If it is entirely general education, how do we involve vocational educators?

One of the problems of vocational education is that not all of the occupations for which people should be trained are defined precisely. There are many service type occupations, the nature of which is "un-chartable."

This leads to the importance of general education in vocational preparation.

Dr. Allen told the story of a former student who had been in his high school social studies class. He used this story as an example of the complexity of the problem of education in general and social studies in particular. He concluded that there were no easy solutions and that, in fact, sometimes the dimensions of the problems were so big that we give up and continue to do what we have been doing in the past without searching for alternatives.

He suggested the possibility of applying the power of the flexible schedule to providing alternatives. In determining these alternatives we should not be afraid to start even if we are not sure what that starting point should be. The important thing is that teachers recognize that there are alternatives.

The task of this conference is the recognition that there are alternatives and the identification of some of these alternatives.

Let us not be afraid of asking hard questions. We should understand that, at the moment, we do not have the answers to these questions -- but, we should not discard the questions.

Dr. Raymond Muessig, Ohio State University

Dr. Muessig discussed recent developments in social studies and their possible relationship to vocationl education. He pointed out that a team effort seems to be indicated. There is a need for "instructional materials and approaches which combine the competencies, insights, and sensitivities of social studies and technical-vocational people--and perhaps specialists in science, art, health and physical education, counseling and guidance, and administration."

Following are some of the developments in social studies which Dr. Muessig believes he sees: The first trend which Dr. Muessig sees is a growing desire to establish more rigorous criteria for the selection of content. All of the social sciences must be considered. Perhaps something of what is taught now will have to be omitted. There may be more of a tendancy in the future to balance content and process; to give more attention to "how things are; to teach methods of uncovering andhandling data; to use fresh approaches to the discovery of new knowledge. We are searching for meaning.

"Students have to be able to handle concepts at their own level of development and to give examples of their own. Instead of being given hardened categories of information, students will be given an opportunity to learn and work with the tools of analysis. Students will be challenged to think their way through conditions with which they are confronted.

"A second trend is the movement toward the inclusion in the curriculum of more contemporary local, state, national, and international affairs; controversial issues; unsolved problems; and open-end situations."

Included in this kind of curriculum would be a "study of such topics as changes in our way of life brought about by various forces; water and air pollution; geographic mobility; population growth; unemployment; newly emerging nations; communistic nations; intergroup relations; labor relations; world peace; and so on.

"Critical or reflective thinking as an educational objective seems to be finding its way into more courses of study and units. and one of its most exciting and promising vehicles is the problems approach.

"More is being done, too with discovery methods which give students a chance to arrive at their own explanations of phenomena and to frame and analyze their own concepts and generalizations.

"Inquiry training approaches are being tried out in various schools. Students are being stimulated to ask questions, to seek alternative routes in question framing and answering, to turn their backs on pat answers or hasty solutions in search of other possibilities. The learner is being cast more into the role of an active explorer and less into the part of a passive container into which "knowns" and "givens" and "findings" are to be poured.

"Stimulation procedures are being tested with the idea that they may bring about increased identification with problems and involvement in their solution.

"The use of various social science games had been proposed as a means to encouraging a more vigorous exchange of ideas, hypotheses, and solutions.

"Divergent thinking is being welcomed increasingly. For example, probing for multiple-causation in complex events as opposed to oversimplified cause and effect relationships is being invited and reinforced."

As a third trend, Dr. Muessig proposed the broadening and sharpening of educational objectives in the social studies. He believes that he sees "a willingness to include more objectives dealing with skills, attitudes, and appreciations along with the more common understanding oriented aims. . . Increasingly, we are drafting objectives in behavioral terms by performance criteria--trying to design learning experiences which really change the things pupils do, say, and feel.

"More and more, I see teachers viewing learning as a complete and continuous cycle (1) beginning with precise objectives; (2) moving through learning activities and materials tailored to the objectives; (3) proceeding on to evaluation procedures designed to assess growth toward the objectives; and (4) finally progressing to the objectives again so they can be strengthened, altered, enlarged, or dropped if they are non-functional."

A fourth trend is away from the single textbook approach toward a multiple materials approach. This trend will contribute to the individualization of learning while still preserving some common experiences for students.

"There will be many more things for gifted and slow students, more background reading material written at various levels and with different content so each pupil will have something to contribute to class discussion, more primary source material, and the like."

Dr. Muessig hopes that he sees a fifth trend toward the expansion of evaluation procedures in the social studies. There may be a growing realization that the primary function of evaluation is to facilitate learning--not to impede it; to help students extend their horizons--not just to label them, or group them, or sort them like eggs."

"I believe that the day will come when we will reward searching behavior; creative, unanticipated responses; and imaginative approaches to problems as much or more than we now reward the faithful parroting of material already set down in books."

A sixth trend, although weak at this point, concerns changes in the typical pattern of social studies offerings. It appears that the approach will be altered and that the program will be more discipline oriented. Dr. Muessig mentioned some of the changes which might occur in the junior and senior high school. He suggested that there would be less repetition and overlapping of social studies courses, more material included from the social science disciplines, and more teams of teachers from different subject areas included in the teaching of courses to be offered.

The seventh trend will be changes in the preparation, certification, selection and assignment of secondary social studies teachers. There has been a movement toward more rigorous academic and progressional programs for prospective social studies teachers in some teacher training institutions. Certification standards are being studies in some states. The requirements for majors will be more rigorous and, in some cases, the minor in social studies education will be eliminated.

Dr. Muessig identified some of the following problems and questions related to the relationship between vocational education and social studies which could result from the trends in the social studies which are outlined above.

"If social studies programs become more discipline oriented and conceptually based, will they have more or less appeal to students interested in technical and vocational education? If these so-called "new" programs require more indepth reading and study, more verbalization of complex ideas, and a higher level of abstraction, will they help or hinder students who may not be headed for college?

"Many social studies teachers are already threatened and overwhelmed by new programs, materials, and suggested teaching strategies. Some are unhappy about the possibility that they will have to up-date, broaden, and deepen their knowledge of history and the social sciences. Certain teachers doubt whether the newly developed programs can be used with even bright, highly motivated students who have had rich past experiences at home and in school--let along with students who have non-academic interests and learning problems. How will these teachers feel, then, about suggestions that they learn a great deal about technical vocational dimensions and develop still other new approaches to working with youth who want unique preparation in this area?

"Many social studies teachers already object to home-room periods, orientation classes, a group of assigned counselees, the use of social studies time for all sorts of non-social science substance. Will they be receptive to the recommendations that they add units or courses in occupations, job interviews and procurement, etc?

"Or, how might social studies teachers feel about programs dealing with the nature of our society and its technological and vocational facets which might be handled by technical-vocational teachers who are not well-grounded in history and the social sciences?"

However, Dr. Muessig concluded, we shoulddeal with these problems in a positive manner. We should not be discouraged. We should seek ideas which have not yet been tried. We should take advantage of the challenge of this conference.

Dr. James P. Shaver, Utah State University

Dr. Shaver began his presentaion with some definitions of terms.

Vocational education refers to education aimed specifically at preparing the student to enter the world of work upon leaving school.

Social studies is traditionally defined in reference to the social sciences. The social sciences are the scholarly fields of study of man in his social environment. The social studies are defined as the social sciences adapted for pedagogical purposes.

Dr. Shaver stated that this definition had been instrumental in stifling creative curriculum work in the social studies. He feels that the criteria for curriculum selection and development in social studies should come from an independent view of what the social studies should be about and not only from the social science disciplines. One of the most striking paradoxes of American education is the heavy emphasis in social studies education on teaching information and the absence of materials for teaching thought process.

"One way to resolve this objectives content paradox would be to adopt a more adequate definition of social studies...social studies education is generaly education... we are talking about a program intended for all students; one which, therefore, should be based on a rationale that takes into account all students, not just those going on to college or those who come to school with an interest in abstract descriptions of the society and its past.

"The most reasonable focus for such rationale is upon the preparation of students for more reflective and effective political participation in their society--a society whose central commitment to human dignity assumes that all citizens have contributions to make to the determination of public policies, and that the schools should foster the ability to participate readily and rationally...

"This is not to say that social science content will be neglected. As a matter of fact, in a social studies curriculum truly geared to the education of intelligent participant citizens, knowledge from the social sciences will be of paramount importance. It will not, however, be selected or organized according to the dictates of the social scientist, but according to the demands of general education.

"We have found in curriculum work such as that carried out by the Harvard Project. (Donald W. Oliver and James P. Shaver, Teaching Public Issues in the High School. Boston: Houghton Mifflin, 1966) that the pressing issues facing the society are of real consequence to secondary school students."

The curriculum should be concerned with the preparation of participant citizens and with experience in adequate conceptual tools for dealing with public controversy.

The curriculum work involved in the Harvard Project has convinced Dr. Shaver that "considerable economy in learning can be effected by focusing instruction on important societal issues and on the conceptual tools and information to comprehend and debate possible solutions."

Dr. Shaver then asked what is the connection between curriculum development in the social studies and the theme of this conference--Social Studies and Vocational Education.

I have quoted Dr. Shaver's response to this question in its entirety because, in my opinion, it represents the reaction of many of the participants in the conference.

"What does all of this have to do with the theme of this conference: Social Studies and Vocational Education.

"In the first place, it seems to me that the problem that must be confronted is simply that of getting the social studies curriculum on its feet. The crying need is for critical and thorough re-examination of what we mean by social studies, including what we hope to accomplish through this aspect of the curriculum, and a careful examination of the correspondence of our instructional programs to our objectives. If that challenge is met, questions about the social studies and vocational education will take care of themselves.

"In fact, I would go so far as to say that the theme of this conference is of dubious value. The suggestion that social studies instruction should be determined on the basis of whether or not the students are in vocational education, instead of on the basis of careful examination of the needs of general education in a democratic society, is appalling to me. It implies, for example, that vocational education students are not going to be the same class of citizens as those who will graduate from college -- that they do not need to be confronted with the same issues, taught the same conceptual skills, provided the same information.

"The suggestion of a different social studies program for vocational education often seems to assume that students who choose to go into a vocation instead of going on to college are less intellectually competent. Therefore, watered-down and less intellectually demanding courses are needed for them; conversely, it is assumed, that because the students going on to college are so bright and will have the benefit of a college education, citizenship education is a waste of time, a redundancy, if not simply superfluous for them. There is, of course, little evidence that college education has a significant impact on citizenship behavior.

"The suggestion that watered-down courses are needed for vocational education students is a supreme insult indicating lack of respect for a significant proportion of our citizenry. Little wonder that students with vocational orientations often see school as soporific and irrelevant. The present content of the social studies all too often is irrelevant and they are insulted by the attitude that they are neither capable nor worthy of engagement in reflection about the pressing problems facing the society--which they too will be called to vote upon.

"There are, of course, two very different types of "Vocational education" students. The first is the student who because of interests and aptitudes has decided to train for entry into vocation upon leaving school. His interests are often mistakenly interpreted by teachers as indicating a lack of intellectual ability when, in fact, many of these students are more able than those who go on to college. For this student, the sad fact is that the social studies curriculum fails to treat him as a capable person, deserving of full-fledged respect--including a curriculum premised not on the interests of academicians, but on the critical problems he should help face as an adult citizen.

"There is another type of vocational education student. This is the student who is not academically able, but who happens to go to a school which sees as its major task the preparation of students for college. In such schools, the so-called vocational education program (often no more than a traditional woodworking--metalworking industrial arts program) is used to keep noncollege bound students busy and out of the way. I suspect that the naming, if not the establishing, of these programs is often stimulated by the availability of federal funds for vocational education. The question here is not one of social studies and vocational education, but of the social studies and the less able student. The solution is not to pretend that the social studies curriculum should be different because of the vocational education label attached to the student. Instead, the answer is to use any potentially instructional method--mechanical or organizational, including programed instruction and individualized instruction--in order to insure that the objectives of social studies education will be fulfilled to the extent possible with every student in the school.

"What I propose, then, is that to ask what is the relationship of social studies to vocational education is a misleading, probably sterile, question. Instead we should direct our attention as educators to questions of what social studies education should be about and how we can best accomplish these objectives with students of differing abilities and interests, regardless of whether they are in a vocational or a college-prep program."

Dr. Edward R. Tower, Ohio State University

(Note - the report of Dr. Tower's presentation is shorter than the report of the other presentations because a printed copy of his speech was not available.)

Dr. Tower does not accept the classification of educational programs as general education and vocational education. There is only education. Vocational education does not have a body of knowldge--there is no such thing as general or vocational education. This designation represents a false dichotomy.

Every subject in the curriculum is vocational to some degree for some people.

An alternative designation could be required education and elective education.

In developing the curriculum we should begin with a question--What should be taught and how should it be taught?

The development of programs for occupational preparation represents the biggest challenge the schools have ever had. Area vocational schools are challenges to the comprehensive high school.

Vocational schools, in Dr. Tower's opinion, have failed miserably. They have been organized, in some cases, because the comprehensive high school has been unable to satisfy the need for vocational education.

Area Vocational Schools will be established in sparsely populated areas. The curriculum in these schools will be developed to meet the needs of the individual student. The persons working on the development of the curriculum wil begin with the assumption that kids need to prepare for vocations. The curriculum will consist of a program relating all of the subjects to be included to a common goal.

Dr. Tower described the work being done at Ohio State University in developing an industrial arts curriculum. He believes that curriculum should be developed by experts. Teachers should receive detailed descriptions of content and many suggestions for ways of teaching that content.

The practice of having curriculum developed by experts and authorities in the field will result, he thinks, in the introduction of more appropriate content and more efficient methods into the educational program in a shorter period of time in more schools than is the case when the curriculum is developed by teachers. Dr. Tower feels that teachers do not have the time nor facilities for study, trial, and dissemination of methods and materials.

Dr. Tower believes that we have not come to grips with the central problem of education--what are we going to teach in the schools? We have not developed the taxonomy of education. We should identify those efficient parts of teaching. We should turn to the most learned professors of education when we work toward the solution of the perplexing questions relating to the identification of the most efficient educational practices.

Small Group Discussions

The persons who made presentaions to the entire group of participants acted as consultants in the smaller groups.

In these sessions the relationship between the social studies and vocational education was discussed. The presentations of the consultants formed the frame of reference for some of the problems which were raised.

Following are some of the topics discussed in the small group sessions: performance criteria, evaluation, phasing, use of community, expectional students (slow-learner, gifted, other), small group discussion, non-grading (grade cards), ability grouping, interdisciplinary planning, vocational student, technical and vocational education, and the comprehensive high school.

One of the suggestions which was made repeatedly by the Stanford Staff (any by the writer) was the necessity for social studies teachers to talk with teachers of vocational programs. Over and over again the admonition was given to establish lines of communication, both formal and informal. All teachers should be working together on the total educational program. (I know my bias is showing, but I have a firm commitment to the importance of this vital association of all teachers in working toward solving the problems of education.)

Economics - Nine Week Course Offered at Golden High School

Economics is offered in Grade 12 in Golden High School for a period of nine weeks.

The units included in the course are supply and demand; methods of determining supply and production; labor as a factor of production; money and banking; inflation and deflation; government policies; forms of taxation.

Performance criteria have been determined for each unit. The objectives are set forth in two dimensions--long range and immediate. The content and activities of the teacher and students are described in large instruction and in small group instruction situations. Students are given minimum assignments to be completed in their independent study time. Some of these assignments can be completed more extensively and intensively to students who are able to do so. Programmed instruction is also included in each unit. This material may be used as a pre-test and/or a check on the student's understanding of the unit.

Roy High School (Roy, Utah) Social Studies Program

The social studies teachers at Roy High School have organized the program according to the following beliefs contained in the philosophy statement of the school.

> "Learning is an individual process . . .
> Education and intellectual development are continuous and life-long processes.
> Knowledge is by nature unified and inter-related rather than fragmented and separated into narrow compartments and course subject matter areas.
> . . . continuous learning experiences for all children requires that individual differences be recognized and subject matter be adapted to the needs and abilities of each learner."

The staff believe that correlative to this philosophy is the notion that all students deviate to some extent from the so-called normal because of some physical, emotional, or mental handicap. An objective of the school reads:

> "To select and design curriculum materials, methods and content appropriate for educational experiences especially adapted for each student in terms of (a) rate of progress (pace, (b) level of difficulty (intensity), (c) depth and breadth (scope), (d) repetition, (e) interest and, (f) need "

In an attempt to follow the stated philosophy and to meet the objective quoted, the social studies teachers have developed a plan to teach the social studies on an individual basis.

A curriculum model has been developed which includes three levels of learning...descriptive, analytical, and interpretive. All of the students enrolled in social studies courses are included in this program which is taught by a team of nine teachers. Following is a description of the program:

"Each student has an advisor whom he meets at certain times for record keeping functions. The student works in curriculum packages at his own pace, level of intensity, scope and need. He may use any or all of the nine members of the team in the course of his work in a package according to his need. If he needs special help he goes to the teacher that best satisfies that need.

"Time is no longer a factor. The curriculum emphasizes performance as the criteria for learning. Proficiency is based on student behavior, not length of course offering. Packages are organized around broad concepts, sub-concepts and the behaviors requisite to these. Students may take pretests and self tests to determine need for further study,

A post test on the package, administered by para-professionals, determines the level of proficiency prior to vertical curricular movement. Basic performance at the descriptive level is required. Quest activities at the analytical and interpretive levels of achievement are encouraged and provide a more horizontal development.

"Since the program is totally individualized, the facility formerly used for large group presentations has become a resource center, including all types of audio and visual data sources. The team of nine teachers are situated at various places in this large room when they meet students individually and in small groups. Five small group discussion rooms lead from the resource center where conference and group activities take place. There are 200 to 300 students working in the facility at all times."

Evaluation procedures which are built into the program will be used to determine the success of the program. No information is available at this time because the program is just getting started. The faculty is working with Dr. Shaver of Utah State University to plan and develop the program.

EVALUATION OF THE STANFORD PROJECT
IN FLEXIBLE SCHEDULING MEETING

Golden, Colorado
April 7, 8, 1967

(Submitted to Conference Coordinators)

Pertinent comments on the seven items on page 1.

(These items concerned the physical arrangements of the conference, caliber of speakers, clarity of aims, and accomplishments of aims.)

I did not complete the questionnaire before leaving the conference as I felt that I needed more time to consider my reactions. I felt that many people were disturbed and then, as I thought about this feeling, it came to me that this is the reason for the success of the conference. Complacency gets you nowhere, but being disturbed is the first step to progress.

People went to the conference with their own ideas and came away with questions and I hope some tentative answers to those questions.

I am not sure that the conference aims were clear to all of those persons attending the conference and, therefore, they were not sure what they were looking for. That is the reason that I circled 3 on the rating sheet for "clarity of conference aims." A review of my notes on Dr. Allen's presentation, however, indicates to me that clearly delineated the aims of the conference.

It seems to me that those conference members to whom I talked agreed that all students need Social Studies and that the courses should not be different for those people enrolled in Vocational Education courses, whatever they may be. In this sense, then the conference was the means of causing the conferees to come to some tentative conclusions or of raising some questions about the relevancy of their Social Studies courses for all students.

Comments on the questions

1. Do you feel there is a real need for the combination or integration of Vocational Education with the Social Sciences?

In order to answer this question I must state my philosophy regarding program planning in the high school as it relates to vocational education. I believe that the specialized courses offered in the high school for occupational preparation are only a part of the total educational program of the student. The courses usually designated as "general education" courses are an integral and basic part of the student's vocational education preparation. It is important that the student be exposed to the kind of information and have the kind of experiences that will contribute

toward making him a good citizen able to deal with the "pressing issues of society" as Dr. Shaver stated in his presentation. Therefore I feel that social studies teachers should consult and meet with teachers of specialized skill courses as curriculum is developed or improved. There should be continual communication among all faculty members so that the development of individual programs will be "in tune" with the total education philosophy program of the school.

2. Were the consultants effective in terms of what each was trying to accomplish?

I believe that the consultants were very effective. Dr. Allen set the stage in his usual clear and delightful style. He raised many questions which provided the basis for discussing the relationship between the social studies and vocational education.

Dr. Shaver brought out the fact that "social studies instruction should be determined on the basis. . . . of careful examination of the needs of general education in a democratic society." And, it seems to me, that this statement embodies the accomplishment of conference aims.

Dr. Muessig, in describing trends in social studies, emphasized the fact that the social studies curriculum should be planned for all students. His listing of concepts with which technical-vocational students might be concerned includes topics about which all students should be concerned. This list, it seems to me, emphasizes the universal nature of the subject matter content in the social studies.

Dr. Towers stated that, according to his classification, there are no vocational education courses. I believe that this statement should be carefully considered in the light of his statement that skills *should* be included in the educational program. He classified the courses included in the high school program as required education and elective education. He pointed out that every course has elements of vocational education according to the occupational plans of the students. I believe that Dr. Towers' presentation further emphasized the importance of the social studies as an integral part of the educational program for all students.

The use of consultants in the small group was very effective and gave the conferees an opportunity to exchange views with them. The social events arranged for the conference participants were helpful too, providing opportunities to get acquainted with the consultants, thereby making it easier to communicate.

3. Which presentation was most helpful to you in suggesting improvements in your social studies teaching?

Question 3 does not apply to my situation. However, in the area of economics, I have been working with social studies teachers, business teachers, economists, curriculum directors, and administrators on developing a statement regarding the role of the business educator in economic education. The members of the staff of the Bureau of Business Education of the California State Department of Education are interested in the improvement of economic education in the high school. We believe that economists should be introduced into the educational program, K-12, by including economic understandings in appropriate courses and by offering a capstone course in economic principles in the 11th or 12th grade. We accept the fact that economics is a social science and that the course may be taught in either the social science department or the business department.

We believe that the best qualified teacher should teach the capstone course in economics. In amny schools the course is not given because a qualified teacher is not available. In some of these schools the business teacher is overlooked as a qualified person to teach this course even though he might have many units of college economics courses. So, we are trying to foster cooperation between the social science department and the business department. We would like to see more team teaching between these two departments in presenting the capstone course.

4. What consensus have you reached, if any, concerning vocational education social studies?

I guess that my opinion regarding vocational education and social studies has been reinforced by attendance at the conference. My opinion is that the social studies program should be a part of the total educational program and should be geared to the needs of the students as part of their general education. Individual differences could be met by the development of appropriate performance criteria.

My second opinion is that the total faculty should be involved in planning vocational education programs as well as all programs offered in the school. Methods and procedures for communication among all faculty members should be developed so that no department will be working in isolation

5. What kinds of changes, if any, do you plan to attempt at your school as a result (directly or indirectly) of this conference?

This question does not apply to my situation. However, if I were in a school I would examine the social studies program in terms of the challenges, trends, methods, procedures, and content contained or suggested by the presentations of the consultants and the examples of programs presented in the Sunday morning meeting. I would talk with the vocational education teachers in my school and explore ways of working together. I would look at my students as individuals and get to know them as well as possible in the limited time available. I would talk with counselors to learn more about my students. I would listen to students and try to convey to them my feeling of genuinely caring about their achievement and welfare. I would talk with the principal and suggest that more opportunities for inter-departmental planning be provided. I would talk with other

social studies teachers in my school and in my district to explore ways of improving the program to provide an instructional program in social studies which, according to Dr. Shaver, "will prepare citizens for participation in a democratic society."

6. How do you feel the conference could have been improved?

There are usually quite a few suggestions that come to my mind when I am asked such a question. There might have been other ways of handling some of the topics but they would have been alternatives and not improvements.

Following are one or two points which occur to me that have no relationship to the success of the conference.

I would like to have a roster of those present and I would have liked to have had it during the conference.

On Monday when I visited the Jefferson County District Office I discovered that several people from that office had attended one or more of the meetings. I would have appreciated knowing they were in attendance and wish they had been introduced at the meeting. This might also have been done for Golden High School faculty who attended.

I hope that my enthusiasm for this conference has been expressed in my responses to the questions. It was a privilege and a delight to meet with such dedicated educators who have a commitment ot the improvement of the educational program of the high school and who are willing to experiment with methods of attaining this goal.

I believe that the Stanford Project in Flexible Scheduling in Vocational Education will have far reaching effects upon the educational program in the high schools of the country, not only in tangible improvements in vocational education programs, but in the spirit of cooperation, experimentation, and innovation fostered by such meetings as the Golden Conference.